



Chemical Compatibility Chart for Rubber Compounds

This chart provides a general guide for the chemical compatibility of various rubber compounds when exposed to different chemicals. It is essential to note that actual performance can vary significantly depending on specific conditions such as temperature, concentration, duration of exposure, and the specific grade of the rubber compound. Always test materials under actual operating conditions before final selection.

Key to Compatibility Ratings

Rating	Description
A - Excellent	Suitable for continuous use. Little or no effect.
B - Good	Suitable for intermittent use. Minor effects possible, but generally acceptable.

Rating	Description
C - Fair	Not recommended for continuous use. Moderate effects may soften, swell, or lose strength.
D - Poor	Not recommended. Severe effects, rapid degradation, dissolution, or embrittlement.
X - Insufficient Data	Compatibility data is not readily available or requires further testing.

Chemical Compatibility Chart

Chemical	Natural Rubber (NR)	Nitrile Rubber (NBR)	EPDM	Silicone (VMQ)	Viton (FKM)	Neoprene (CR)
Acetone	D	C	B	A	A	D
Ammonia (aqueous)	B	B	A	A	B	B
Benzene	D	D	D	C	A	D
Bleach (Sodium Hypochlorite)	B	C	A	B	A	C
Butane	A	A	A	A	A	A
Diesel Fuel	C	B	D	D	A	C
Ethanol	B	A	B	A	A	B
Ethylene Glycol	A	A	A	A	A	A
Hydrochloric Acid (dilute)	B	B	A	B	A	B
Hydrogen Peroxide	C	C	A	A	B	C
Kerosene	C	B	D	D	A	C
Lube Oils (Petroleum)	C	A	D	D	A	B
Methane	A	A	A	A	A	A
Methyl Ethyl Ketone (MEK)	D	D	B	C	B	D

Chemical	Natural Rubber (NR)	Nitrile Rubber (NBR)	EPDM	Silicone (VMQ)	Viton (FKM)	Neoprene (CR)
Mineral Oil	A	A	D	B	A	B
Nitric Acid (dilute)	D	D	C	C	B	D
Phenol	D	D	D	C	A	D
Sodium Hydroxide	B	B	A	A	B	B
Sulfuric Acid (dilute)	B	C	A	B	A	C
Toluene	D	D	D	D	A	D
Water (fresh/salt)	A	A	A	A	A	A
Xylene	D	D	D	D	A	D

Important Considerations

- **Temperature:** Elevated temperatures generally reduce chemical resistance.
- **Concentration:** Higher chemical concentrations typically lead to increased degradation.
- **Pressure:** High pressure can accelerate the absorption of chemicals into the rubber.
- **Mechanical Stress:** Combined chemical exposure and mechanical stress (e.g., tension, compression) can lead to accelerated failure.
- **Mixtures:** The compatibility of rubber with chemical mixtures can be complex and may not be predictable from the compatibility with individual components.
- **Specific Grades:** Different grades or formulations of a given rubber type may exhibit variations in chemical resistance.

For specific applications, please contact our technical team with the full application details.

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